CHAPTER TWO

Growth and Rents in the Real Economy

The fundamental principle of human action—the law that is to political economy what the law of gravitation is to physics—is that men seek to gratify their desires with the least exertion.
— Henry George

In the course of presenting his analysis Henry George made a number of important claims that deserve further study. In this chapter, we will delve into the second of the five main points that were briefly described in the introduction, namely, that the total value of land in a region tends to equal the value of aggregate output of that region (or country). This claim has not been given the recognition it merits. Using a simple, 20th-century economic model, we will show that aggregate real estate values in an area or a nation—that is, capitalized rents—tend to equal the GNP (the total value of all output) for that area or nation. This is far from intuitively obvious, and, at first glance, is not easy to understand. The model presented here, however, demonstrates that George's claim can, indeed, be the case.

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In *Progress and Poverty*, Henry George praises the Ricardian theory of rent but contends that it has been fundamentally misunderstood. Ricardo, following Malthus et al., sees growth pushing cultivation to poorer land, yielding diminishing returns

and lower average productivity. By contrast, George sees growth leading to greater specialization and division of labor, and so to *higher* average productivity. Either way produces the differentials that are the basis of rent. Also, Georgist scholars have always sought to advance this new approach to rent but have run into frustration related to other claims that George made. For instance, Georgist empirical work has come to suggest a strong connection between the GNP of an area and the value of real estate in that area—that they have a close, even one to one, relationship to each other. Yet what is the rationale for this? It certainly does not follow from mainstream economics, but up to now it has not found a Georgist foundation either. Both issues will be tackled in this chapter.

To begin the analysis we need to consider George's divergence from Ricardo regarding rents. In place of the alleged pressure to move to more marginal (less fertile) land, George proposes two quite different processes that lead to increasing rents. He starts from an imaginary condition in which a single settler (and family) arrives at a vast and fertile plain, the "unbounded savannah," in which all the land is rich and there is no economic reason to choose one plot over another, so he settles arbitrarily. Life is difficult though the soil is highly productive. Then other settlers arrive and to have companionship and the prospect of mutual help, choose lands very close to his. There is plenty of land, and still no particular reason to choose one plot over another: no rents here.

The settlers living in close proximity are able to cooperate, helping one another use the land more productively. As still

others arrive and join them, they are able to take advantage of separation of function and division of labor, and productivity increases rapidly. So, living close to this community offers benefits; living further away means a lesser ability to take advantage of its innovations, cooperation, and productivity. Location matters: certain locations offer advantages, others disadvantages, relative to normal profitability. These advantages have a value—a price—and thus we have rents.

George thought in terms of "progress," roughly meaning growth and development—more worker-settlers, greater division of labor and higher productivity, and general diversification. Newly arriving settlers will set up family farms or small family businesses—a country store, a blacksmith shop, a furniture maker. Many will come with capital (tools, materials, etc.), and they will maintain their capital, "abstaining" from consuming and accumulating. This is equivalent to "saving" in real terms, and such saving is automatically invested.

The first process is settlement, the moving-in of new families. This produces "population pressure," and while this may lead to expanding cultivation to poorer lands—as Ricardo and Malthus argued and which would give rise to Ricardian rents— George rightly does not consider this important. The arrival of new settlers should be understood not as "expanding the area of cultivation," but as "expanding the area of settlement"—enabling the entire population to specialize more and cooperate better, allowing for greater separation of function and division of labor. Very Smithian. The older, original areas of settlement benefit from this; they are the centers of commerce. Regardless

of the quality of the land, the location of the original settlement becomes a focal point for business and culture, and thus earns rents. Locations that are further away are not as desirable and will earn lower rents. As the population expands, settlements will spread outward; distant settlements will be the poorest, and will offer no, or minimal, rents, even if the land is just as productive as in the more populated areas. As the more populated, and more productive, city grows, the closest settlement will earn higher and higher rents as settlement expands, due essentially to the benefits of location. Some locations will turn out to have special features—hills and cliffs that provide shelter from the prevailing winds, hillsides that face the sun (important for vineyards), and so on.

The second process that comes into play as settlement expands leads not only to division of labor but also to innovation and new methods of production—and new products. As labor's productivity rises, the labor released from existing activities will be redirected into new activities—but these will normally require land also. Hence, there will be a rise in demand for land, which will tend to drive up rental values and land prices.

The first process—expansion of settlement—as described by George, clearly implies expansion of demand. Let us assume that is so—that demand expands in proportion to population growth. The second process is one of productivity growth. Let us say that the growth in productivity leads to an exactly equal rise in demand for land, resulting in an equiproportional rise in land prices. So, both processes taken together will expand overall output by a certain percentage and thus, in short, will tend to drive up rents by more or less the same percentage.

One could reasonably argue that this has been true since the time of the original settlers. Rents will always tend to be a percentage of aggregate output, equal to the growth rate. Thus, land values are the capitalized value of rents, and the appropriate interest rate for capitalization is the long-term rate, which will always be close to the growth rate. This, and another remarkable result, can be demonstrated by using a simple, 20th-century, Keynesian model.

Let Y_0 stand for the level of "no-rent" output in the early stages of development. At this point everything is "nearby"; all locations are equally good, and there is no scarcity of land or resources.

$$Y_0 = C_0 + I_0 = W_0 + P_0, \text{ where } W_0 = C_0 \text{ and } P_0 = I_0$$

The output (Y) will consist of consumer goods (food, clothing, shelter, transport) and capital goods (tools, equipment, buildings, machinery), where each category of goods is produced by the industries of the corresponding sector. We can provisionally assume that wages (W) are spent on consumer goods (consumption, C), while profits (P) go to investment (I) in capital goods.

As development proceeds, industries will become increasingly defined by the separation of function, and the firms will find favored niches and locations, better resources, and more convenient ways to cooperate—and to compete. As development proceeds, there will turn out to be both exceptionally rich deposits of resources and much poorer ones. As the firms settle in, many will find that they are able to earn above normal profits—or that some have ownership of an advantageous location

or resource that they can rent out to another producer. Some unlucky firms will end up struggling in unfortunate places, hard-pressed to keep afloat.

A great deal of "unpaid" or non-monetized labor will be performed in households—cooking, cleaning, laundering, nursing, repairing buildings and equipment, even fundamental construction work. (Part of development will consist of shifting this labor into the monetary economy, mechanizing or "technologizing" it in the process.)

In these early stages, government will be very small, and consist mostly of services—police, courts, and some infrastructure (e.g., schools and sewers, paid for by taxes). The argument so far neglects government, because it is small. Once it becomes larger, however, it must be shown that if taxes fall on income and sales, while spending goes toward goods and services, it does not affect the argument that growth will push up rents. Of course, the Georgist point—which we will pursue in subsequent chapters—is that taxes should fall wholly on rents, and that if they did so, growth would be stronger and employment higher.

Now consider growth from the initial period to the next period. New settlers move in, new patterns of cooperation emerge, certain locations prove highly advantageous, others have serious drawbacks, some resources are better than others, some land is easier to cultivate—in short, there are many differentials of many kinds. Those who have positioned themselves in favorable locations will benefit, either by producing at an advantage or renting their positions to other producers. The pressures generating growth work themselves out partly by expanding

economic activities—investing and building capacity, intensify-ing cultivation, producing more goods and services, furthering the division of labor and innovation—but also partly by paying rents for access to and use of superior locations and resources, and by driving up the prices of scarce skills, specialized knowl-edge, and tools.

$$(1 + g)Y_0 = Y_1 = C_1' + I_1',$$

where the apostrophes indicate that consumption and invest-ment, still the only two categories of goods, have been increased as a result of the pressures from growth (g) but not in a neat or proportional way. In fact,

$$Y_1 = C_r' + I_1' = W_1' + I_1' + R_1.$$

Wages no longer equal consumption, nor profits invest-ment. Instead, the pressures of growth have led to a new cate-gory of returns to ownership—rents (R)—that are totally "un-productive." These rents accrue to the owners of the various locations, resources, etc., described above; they are deductions from wages and profits, and in the early stages will be largely spent on consumption goods, but also at times on investment goods, although most analysts favor the idea that the spending of rentiers tends to be wasteful—luxury consumption. (In later stages of development, rents will be "invested" not in productive facilities, but in speculation on asset values—stocks, bonds, real estate itself, foreign exchange, and so on.)

The size of the rents at any time—the amount of purchasing power drawn away from wages and profits—will be proportional to the rate of growth, g. Let us call α the proportionality factor; it could equal 1, so that g puts full pressure on rents, as Henry George thought; or it could be significantly less, in which case growth will increase rents but the effect could be small or negligible. In either case, the rents in any period will equal α times g times Y:

$$R_i = R_i - 1 + \alpha g(Y_i - Y_{i-1}) = R_{i-2} + \alpha g(Y_{i-1} - Y_{i-2}) + \alpha g(Y_i - Y_{i-1}) = \ldots$$
so
$$R_n = R_0 + \alpha g[(Y_1 - Y_0) + (Y_2 - Y_1) + \ldots (Y_n - Y_{n-1})].$$

Rents are proportional to g, but if at any point $g = 0$, rents do not disappear; they fall to their previous level, R_{i-1}. If $g < 0$, then rents will diminish from the previous level in proportion to negative g. For the moment let us assume that g is always the same; or perhaps, that a moving average of g's over several years is constant. Clearly, then, we can replace the rental term at the beginning of the right-hand side of the appropriate formula for rents all the way back to the beginning of the "settlement."

Now consider the value of the rental properties, that is, of the total "real estate." That value will be the capitalized value of the rents. The rents should be capitalized at the long-term rate of interest, usually close to or equal to the rate of growth. Let the difference between the long-term rate of interest and the growth rate g be indicated by the factor γ. If this factor is equal to 1,

there is no difference; if it is greater or less than 1, the long-term interest rate is greater or less than the rate of growth. Then the value of real estate will be

$$RE_{value} = (1/g\gamma)[rents] = (1/g\gamma)[\alpha g\{(Y_1 - Y_0) + (Y_2 - Y_1) + (Y_3 - Y_2) + \dots$$
$$\dots + (Y_n - Y_{n-1})\}]$$

But the sum of the differences between Y in one period and the next, from the first no-rent period to the present, is the current level of Y, and the g's cancel out. Then we have

$$RE_{value\ period\ n} = \alpha/\gamma Y_n]$$

If α and γ are both unity, the value of total real estate in any period will be equal to the aggregate GNP of that period. If α and γ are close to unity, or to each other, the value of real estate will be close to the level of GNP. Such closeness was the finding that mystified Georgist and other investigators—but it follows very naturally from George's approach.

It also follows that today capitalized land is, for all practical purposes in the market, a form of financial capital. It is a claim to a real asset, and it has regular earnings: rents. It can be bought and sold; it can be securitized, so that the actual asset need not be involved—land-backed securities can be bought and sold like any other securities. This point will be dealt with when we consider the contemporary world of finance and speculation.